

What is claimed is:

1. An apparatus, comprising:
a vacuum source configured to produce a pressure level in response to an input signal;
a movable member; and
a housing defining a cavity and coupled to the vacuum source, the housing being configured to output a haptic feedback by engaging the moveable member, the haptic feedback being associated with the pressure level, the pressure level being associated with a volume defined by the cavity and the moveable member.
2. The apparatus of claim 1, wherein the vacuum source includes:
an actuator;
an air piston; and
a tube having a first end portion and a second end portion, the first end portion being coupled to the air piston and the second end portion being coupled to the housing.
3. The apparatus of claim 1, wherein the housing is substantially cylindrical.
4. The apparatus of claim 1, wherein the housing has an arcuate length parallel to a rotational direction of motion of the moveable member.
5. The apparatus of claim 1, wherein the pressure level is greater than an atmospheric pressure in an environment surrounding the moveable member and the housing.
6. The apparatus of claim 1, wherein the input includes a signal, the signal being modulated between approximately 20 Hz and 20 kHz.

7. The apparatus of claim 1, further comprising:
a biasing element, the biasing element being configured to bias the housing against the moveable member.
8. The apparatus of claim 1, further comprising:
a processor, the processor being configured to provide the input signal to the vacuum source.
9. A method, comprising:
providing a vacuum source configured to produce a pressure level in response to an input signal;
providing a moveable member; and
providing a housing, the housing defining a cavity and coupled to the vacuum source, the housing being configured to output a haptic feedback by engaging the moveable member, the haptic feedback being associated with the pressure level, the pressure level being associated with a volume defined by the cavity and the moveable member.
10. The apparatus of claim 9, wherein providing the vacuum source includes:
providing an actuator;
providing an air piston; and
providing a tube, the tube having a first end portion and a second end portion, the first end portion being coupled to the air piston and the second end portion being coupled to the housing.
11. The method of claim 9, wherein providing the housing includes providing a substantially cylindrical housing.

12. The method of claim 9, wherein providing the housing includes providing a housing having an arcuate length parallel to a rotational direction of motion of the moveable member.
13. The method of claim 9, wherein providing the vacuum source includes providing a vacuum source configured to output a pressure level that is greater than an atmospheric pressure in an environment surrounding the moveable member and the housing.
14. The method of claim 9, further comprising:
providing a biasing member, the biasing member being configured to bias the housing against the moveable member.
15. The method of claim 9, further comprising:
providing a processor, the processor being configured to provide the input signal to the vacuum source.
16. A method, comprising:
receiving a signal; and
modifying, based on the received signal, a pressure within a volume defined by a cavity of a braking member and a moveable member, such that a resistive force is applied to the moveable member.
17. The method of claim 16, further comprising:
frictionally engaging a surface of the moveable member with the braking member, the resistive force being a function of the pressure within the volume.
18. The method of claim 16, wherein receiving the signal includes:

receiving the signal at a vacuum source, the vacuum source being configured to modify the pressure within the volume in response to the signal.

19. The method of claim 16, wherein receiving the signal includes:

receiving the signal at an actuator, the actuator being coupled to an air piston, the air piston and the actuator collectively configured to modify the pressure within the volume in response to the signal.

20. The method of claim 16, wherein modifying the pressure within the volume includes modifying the pressure to generate a pressure differential between an environment outside of the volume and the pressure within the volume.

21. The method of claim 16, wherein the signal is modulated between approximately 20 Hz and 20 kHz.

22. The method of claim 16, wherein the receiving the signal includes receiving the signal from a processor.

23. A processor-readable medium storing code representing instructions to cause a processor to perform a process, the code comprising code to:

receive a signal; and

modify a pressure within a volume defined by a cavity of a braking member and a moveable member based on the received signal, a resistive force being output to the moveable member based on the modifying the pressure.

24. The processor-readable medium of claim 23, wherein the code to modify the pressure within the volume includes code to modify the pressure to generate a pressure differential between an environment outside of the volume and the pressure within the volume.

25. The processor-readable medium of claim 23, wherein the code further includes code to:
provide a drive signal to a vacuum source, the drive signal being modulated between
approximately 20 Hz and 20 kHz.